Suicide

By North Dakota Children, Teenagers and Young Adults

The North Dakota Response

We are North Dakota citizens with the belief that it is possible to reduce suicide in the youth and young adults of our state.

North Dakota Adolescent Suicide Prevention Task Force

September 2000

Suicide

By North Dakota Children, Teenagers and Young Adults

"We must promote public awareness that suicides are preventable. We must enhance resources in communities for suicide prevention programs and mental and substance abuse disorder assessment and treatment. And we must reduce the stigma associated with mental illness that keeps many people from seeking the help that could save their lives."

Dr. David Satcher, United States Surgeon General

Development of this plan was facilitated by the North Dakota Adolescent Suicide Prevention Task Force

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Division of Emergency Health Services
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Methodology

A variety of data sources were used in the preparation of this document. Youth suicide rates for North Dakota, the United States and other states were obtained from the National Center for Health Statistics at the Centers for Disease Control and Prevention. National data was available for the years 1979 through 1996. Ten-year average rates were obtained to improve reliability of age-specific mortality comparisons. Rates calculated on fewer than 20 occurrences should be considered unreliable.

North Dakota race and regional data was obtained from the North Dakota Department of Health (NDDoH). A 10-year period of 1987 through 1996 was used to improve reliability of race and regional data. County data was not used due to the very small numbers of youth suicides in small population counties.

Youth suicide and alcohol behavior information was obtained from the 1995 and 1999 North Dakota Youth Risk Behavior Survey (YRBS) and the 1995 and 1997 national Youth Risk Behavior Survey. The national 1999 survey results were not available at the time of publication. Confidence intervals (95 percent) were shown in YRBS graphs.

Acknowledgements

This plan is the result of the collaborative efforts of many people and organizations who were brought together through the North Dakota Adolescent Suicide Prevention Task Force.

The Task Force was organized by the North Dakota Department of Health (NDDoH) [Injury Prevention Program, Division of Maternal and Child Health and the Emergency Medical Services for Children Program (EMSC), Division of Emergency Health Services] in response to increased concerns about suicide deaths to children and adolescents. Lt. Governor Rosemarie Myrdal chaired the task force and provided critical support for it. A list of task force members is included with this document.

The first meeting was held in December 1998. At that meeting, task force members defined their purpose as follows:

(1) Assess available data on suicide in North Dakota and compare it to national.
(2) Determine what activities are currently underway in North Dakota to reduce the number of suicides to youth.
(3) Provide recommendations to work towards reducing suicides in North Dakota.
(4) Prepare a state plan for suicide prevention in North Dakota.

The mission statement for the task force was established as follows:

"*We are North Dakota citizens with the belief that it is possible to reduce suicide in the youth and young adults of our state.*"

The task force used a "small group process" to brainstorm and prioritize strategies and recommendations to be included in the plan.

The task force wishes to acknowledge the following individuals for their part in developing this document:

- Stephen McDonough, MD provided data review and analysis and discussion of suicide risk factors.
- Mark Lomurray, LSW conducted an assessment of current suicide prevention activities and developed recommendations for the task force to discuss.
- Carol Holzer and Shelly Arnold organized task force meetings and facilitated publication of the plan.

Executive Summary

- From 1989 through 1998, 22 North Dakota children ages 10 through 14 and 187 adolescents and young adults ages 15 through 24 committed suicide.

- North Dakota had the second highest suicide rate in children ages 10 through 14 and the sixth highest suicide rate in teenagers 15 through 19 in the United States during 1987 through 1996.

- The percentage (14.5) of deaths due to suicide in North Dakota children ages 10 through 14 from 1987 through 1996 greatly exceeded the national percentage (6.1). The percentage (24.9) of deaths due to suicide in North Dakota teenagers 15 through 19 from 1987 through 1996 greatly exceeded the national percentage (12.6). Suicide makes a much greater impact on child mortality in North Dakota than it does in the United States.

- North Dakota's suicide rate (16.2 per 100,000) for white teenagers, ages 15 through 19 from 1987 through 1996, was 42 percent higher than the national rate for white teenagers (11.4).

- During the 10-year period from 1987 through 1996, the suicide rate actually was higher in North Dakota young people than in the elderly, reversing the national pattern of higher rates in the elderly.

- North Dakota is part of a region (western and intermountain plain states) with elevated youth suicide rates. The reasons for the regional increase in youth suicides are unknown. Rural remoteness, isolation, the stigma associated with mental health services, cultural factors, and higher rates of youth alcohol use may explain regional differences in youth suicide rates.

- North Dakota is one of the first states to establish a state suicide prevention task force and to use federal dollars to fund suicide prevention efforts. North Dakota's support will only partially fund recommended suicide prevention efforts.

- The Surgeon General of the United States has found that suicides are preventable and has made recommendations for prevention efforts.

- Suicide rates are highest in males and Native Americans.

- The suicide rate for Native Americans in North Dakota greatly exceeds that for whites. Overall, the Native American suicide rate was 257 percent higher than the white suicide rate from 1989 through 1998. The Native American age group 15 through 24 has a suicide rate (73.8/100,000) that is 429 percent higher than the white rate (17.2) for the same age group.

- The suicide rate for North Dakota teenage girls is much higher than the national average.

- The majority of youth suicides are committed with firearms. The suicide rates for firearm and non-firearm suicides exceed the national average.

A long-term approach is needed to reduce youth suicides in North Dakota. The following recommendations are made to help reduce the number of youth suicides and the suicide rate in North Dakota:

1. Education of health care professionals - especially primary care providers (family physicians, pediatricians), psychologists and psychiatrists - about the extent of youth suicide in North Dakota and recommended screening, assessment and prevention strategies.

2. Education of the public, policy makers, and the media regarding the extent of youth suicide and recommended suicide prevention efforts.

3. Development of regional children services coordinating committee suicide prevention plans with adequate funding of prevention activities. The prevention plans must take a community and family-centered focus with identification and referral of high-risk youth. The prevention plans also must incorporate youth mentoring activities.

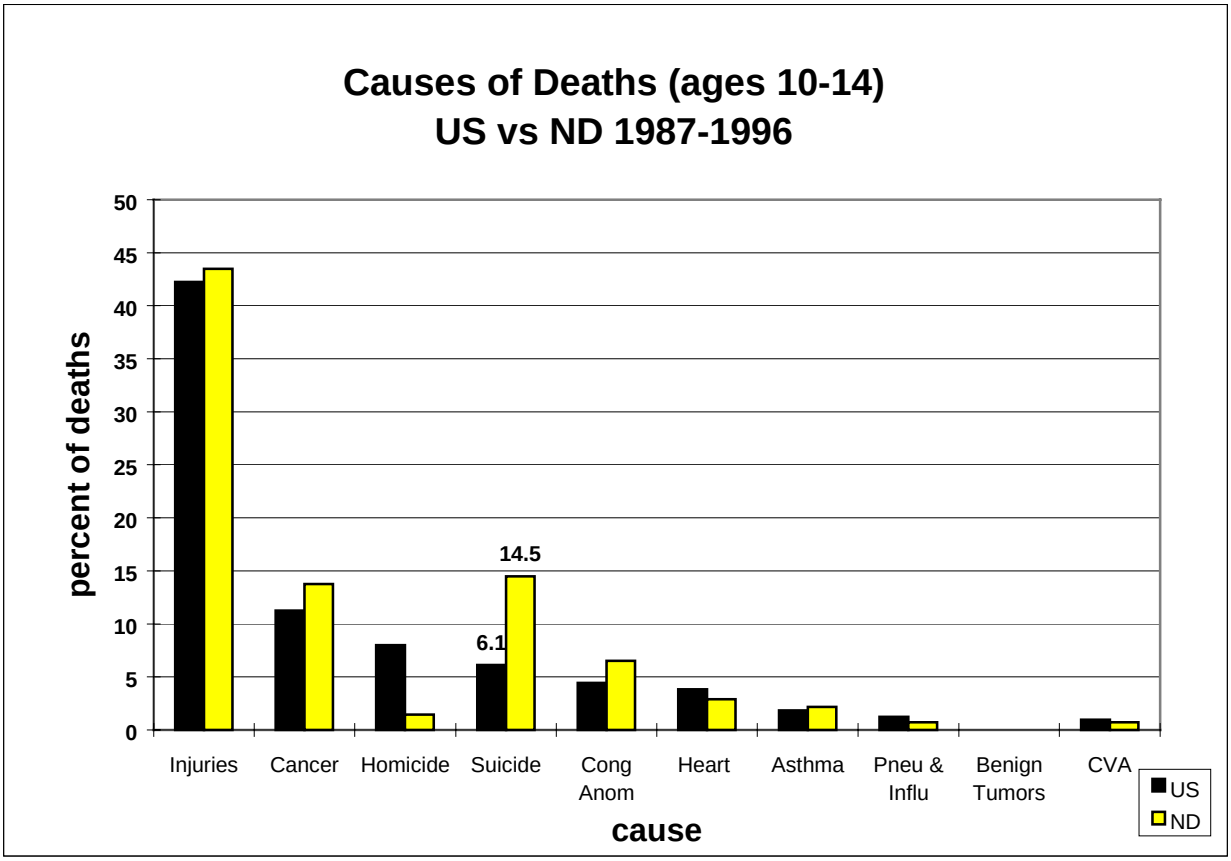
4. Crisis response teams should continue and should shift focus to prevention activities while maintaining their capacity to respond and prevent secondary suicides.

5. Suicide prevention activities should be evaluated for effectiveness over the next decades.

Suicide in the United States and North Dakota

In 1994, there were 31,142 persons in the United States who committed suicide, and suicide was the ninth leading cause of death (CDC-1997). In 1998, 75 North Dakotans committed suicide, and suicide was also the ninth leading causes of death. The age-adjusted suicide death rate for North Dakota (11.6/100,000) during the most recent 10-year period (1987-1996) from which national vital records are available is the same as the national rate (11.6/100,000).

North Dakota differs with the national picture when it comes to our children. In the United States, suicide is the fourth leading cause of death for children ages 10 through 14 and the third leading cause of death for adolescents and young adults ages 15 through 24 (CDC 1995). From 1987 through 1996 in North Dakota, suicide was the second leading cause of death for children ages 10 through 14 and the second leading cause of death for adolescents and young adults ages 15 through 24. Suicide accounted for 14.5 percent of deaths in North Dakota children ages 10 through 14, compared to 6.1 percent for United States children. North Dakota's suicide rate was 4.0 compared to 1.6 per 100,000 nationally.



Cause of Death for Children
Ages 10-14
US vs ND

United States					North Dakota				
Rank	Cause	#	Rate	Percent	Rank	Cause	#	Rate	Percent
1	Unintentional Injuries	19386	10.9	42.3	1	Unintentional Injuries	60	121	43.5
2	Malignant Neoplasms	5165	2.9	11.3	**2**	**Suicide**	**20**	**4.0**	**14.5**
3	Homicide	3671	2.1	8.0	3	Malignant Neoplasms	19	3.8	13.8
4	**Suicide**	**2811**	**1.6**	**6.1**	4	Congenital Anomalies	9	1.8	6.5
5	Congenital Anomalies	2036	1.1	4.4	5	Heart Disease	4	0.8	2.9
6	Heart Disease	1756	1.0	3.8	6	Bronchitis, Emphysema, Asthma	3	0.6	2.2
7	Bronchitis, Emphysema, Asthma	846	0.5	1.8	7	Homicide	2	0.4	1.4
8	Pneumonia and Influenza	565	0.3	1.2	8	Anemias	2	0.4	1.4
9	Cerebrovascular	438	0.2	1.0	9	Pneumonia and Influenza	1	0.2	0.7
10	Benign Neoplasia	422	0.2	0.9	10	Cerebrovascular	1	0.2	0.7
	All	45882	25.823	100		All	138	27.8	100

The suicide rate is elevated among North Dakota adolescents (18.0 compared to 10.7 nationally), and suicide plays a more important role in adolescent mortality (24.9 percent in North Dakota, 12.6 percent nationally). Suicide makes a much greater impact on adolescent mortality in North Dakota than it does in the United States.

Cause of Death for Adolescents
Ages 15-19
US vs ND

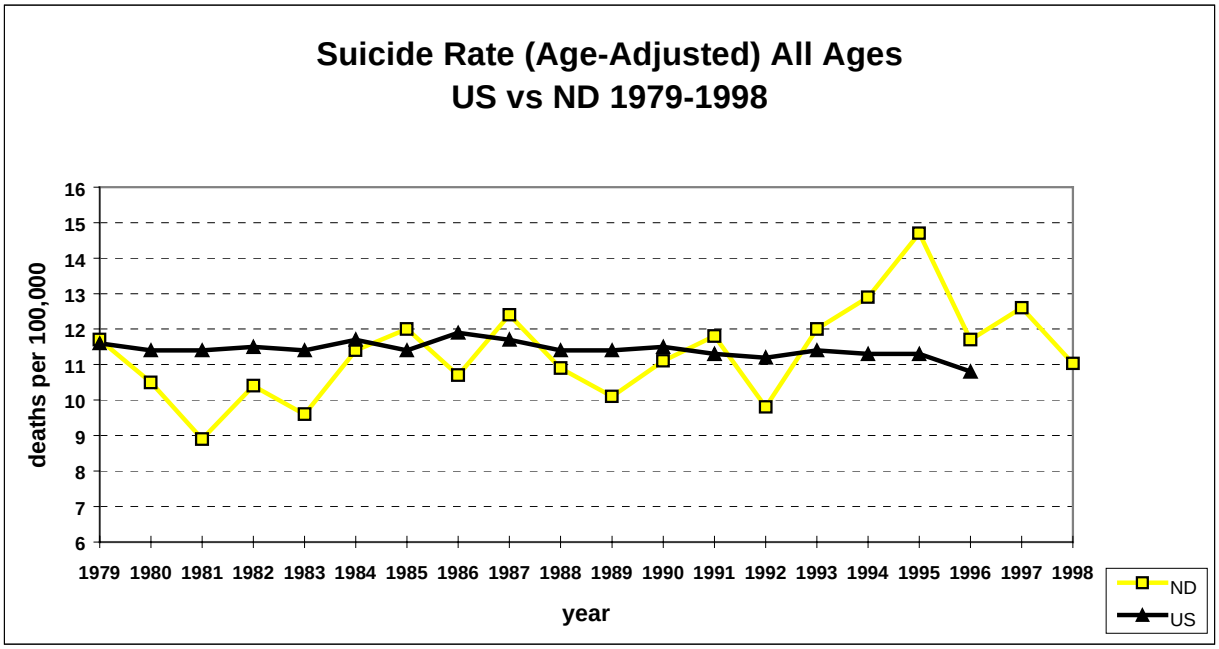
United States					North Dakota				
Rank	Cause	#	Rate	Percent	Rank	Cause	#	Rate	Percent
1	Unintentional Injuries	72036	40.2	47.2	1	Unintentional Injuries	180	37.3	51.4
2	Homicide	29485	16.5	19.3	**2**	**Suicide**	**87**	**18.0**	**24.9**
3	**Suicide**	**19234**	**10.7**	**12.6**	3	Homicide	13	2.7	3.7
4	Malignant Neoplasms	7431	4.1	4.9	4	Malignant Neoplasms	13	2.7	3.7
5	Heart Disease	3712	2.1	2.4	5	Heart Disease	10	2.1	2.9
6	Congenital Anomalies	2290	1.3	1.5	6	Congenital Anomalies	6	1.2	1.7
7	Muscular Dystrophy	1189	0.7	0.8	7	Muscular Dystrophy	5	1.0	1.4
8	Bronchitis, Emphysema, Asthma	999	0.6	0.7	8	Bronchitis, Emphysema, Asthma	4	0.8	1.1
9	Pneumonia and Influenza	917	0.5	0.6	9	Pneumonia and Influenza	3	0.6	0.9
10	Cerebrovascular	689	0.4	0.5	10	Cerebrovascular	1	0.2	0.3
	All	152684	25.823	100		All	350	72.5	100

The suicide rate is elevated among North Dakota young adults (19.4 compared to 15.2 nationally), and suicide plays a more important role in young adult mortality (23.2 percent in North Dakota, 15.2 percent nationally).

Cause of Death for Young Adults
Ages 20-24
US vs ND

United States					North Dakota				
Rank	Cause	#	Rate	Percent	Rank	Cause	#	Rate	Percent
1	Unintentional Injuries	82600	43.7	40.3	1	Unintentional Injuries	207	42.3	50.5
2	Homicide	41729	22.1	20.3	**2**	**Suicide**	**95**	**19.4**	**23.2**
3	**Suicide**	**28749**	**15.2**	**14.0**	3	Malignant Neoplasms	23	4.7	5.6
4	Malignant Neoplasms	10447	5.5	5.1	4	Homicide	13	2.7	3.2
5	Heart Disease	6234	3.3	3.0	5	Heart Disease	14	2.9	3.4
6	HIV	5171	2.7	2.5	6	Congenital Anomalies	9	1.8	2.2
7	Congenital Anomalies	2316	1.2	1.1	7	Cerebrovascular	3	0.6	0.7
8	Pneumonia and Influenza	1486	0.8	0.7	8	Bronchitis, Emphysema, Asthma	3	0.6	0.7
9	Cerebrovascular	1433	0.8	0.7	9	Chronic Liver Disease	3	0.6	0.7
10	Bronchitis, Emphysema, Asthma	1061	0.6	0.5	10	HIV	2	0.4	0.5
	All	205138	108.5	100		All	410	83.7	100

High suicide rates in North Dakota are found mainly in the childhood, adolescent, and young adult age groups. Since 1979, North Dakota's overall suicide rate usually has been lower than the national average.



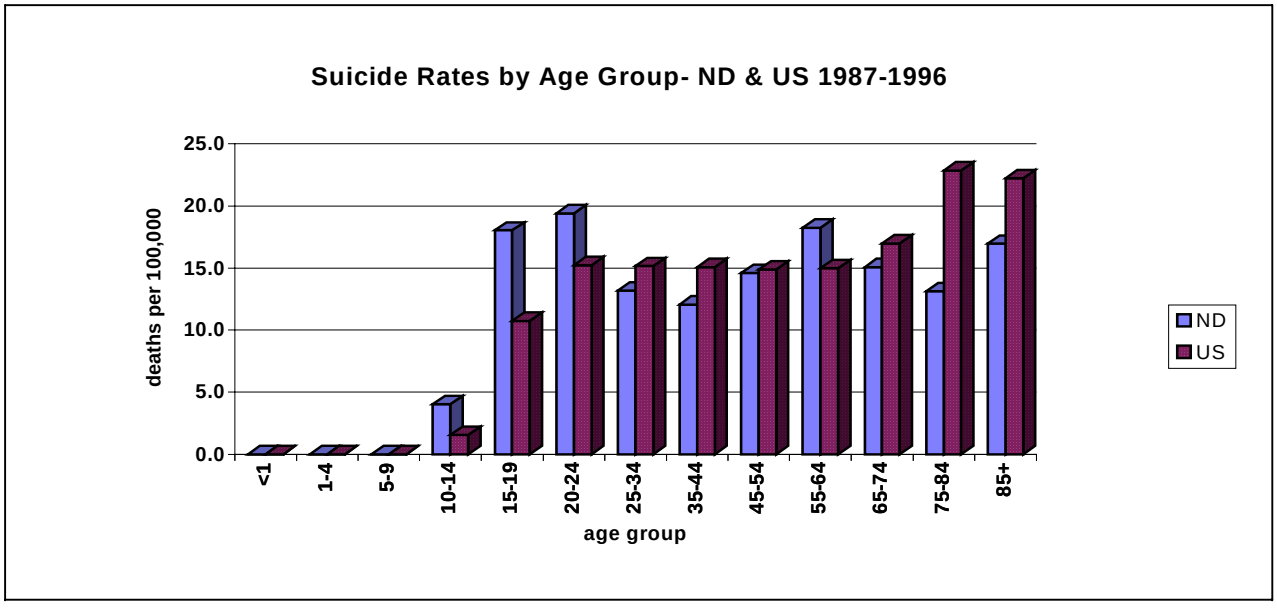
Risk Factors and Causes of Suicide

Causes of suicide include mental illness (especially depression and schizophrenia), history of domestic violence or child abuse, drug/alcohol use, and impulsivity (Rosenberg). Risk factors include adolescent age, male gender, rural environment, race, and access to firearms.

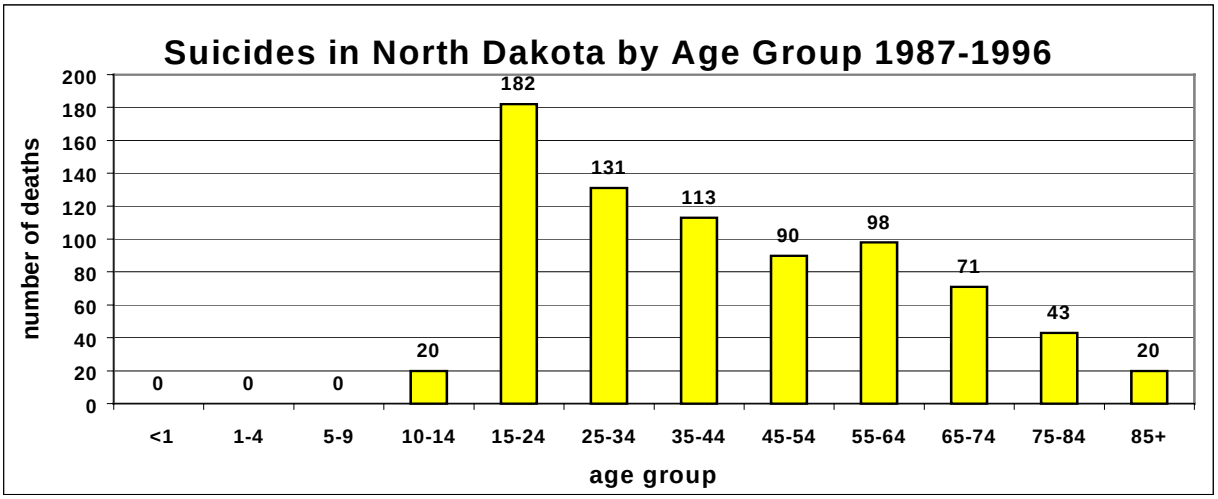
Age

Within the child and adolescent range, the suicide rate and the rate of attempted suicide increase with age and become much more common after puberty. While prepubertal children may consider suicide, they are probably (perhaps temporarily) protected against suicide by their immaturity, which prevents them from planning and executing a lethal suicidal attempt despite suicidal impulses.

During the 10-year period from 1987 through 1996, the suicide rate was actually higher in North Dakota young people than in the elderly, reversing the national pattern of higher rates in the elderly.

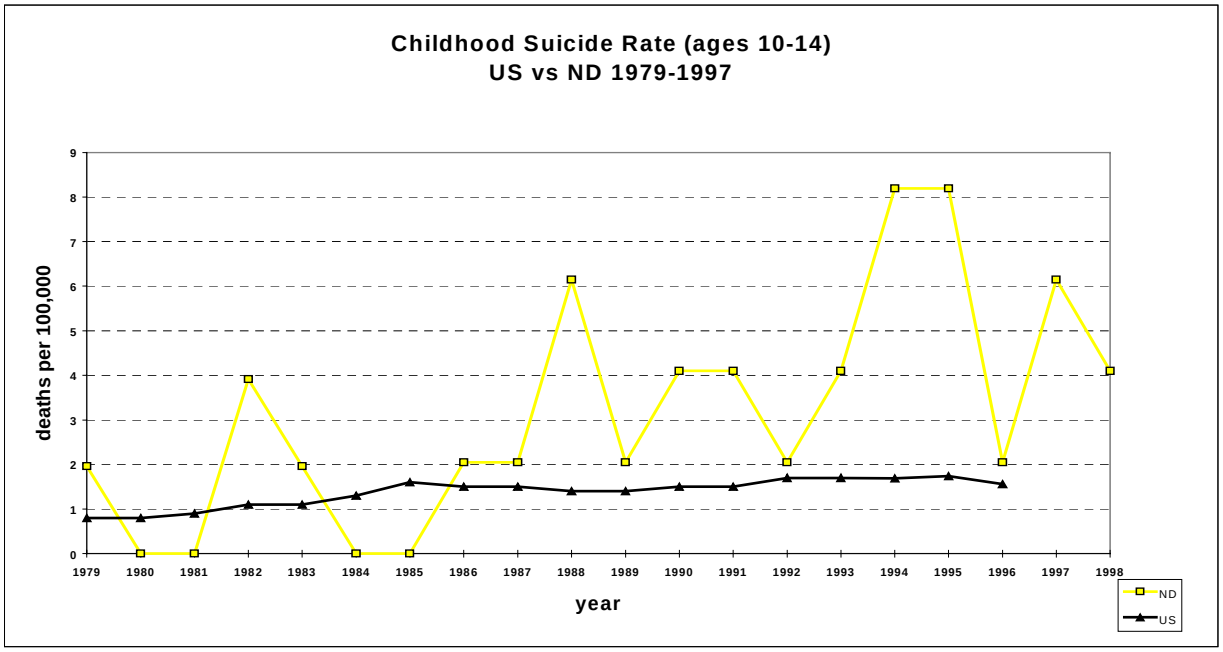


Far more North Dakotans committed suicide (182) in the age group 15 through 24 from 1987 through 1996 than in any other age group.



Ages 10 through 14

North Dakota's childhood (ages 10 through 14) suicide rate of 4.0 per 100,000 from 1987 through 1996 was second highest in the country and more than twice the national rate of 1.6 per 100,000.

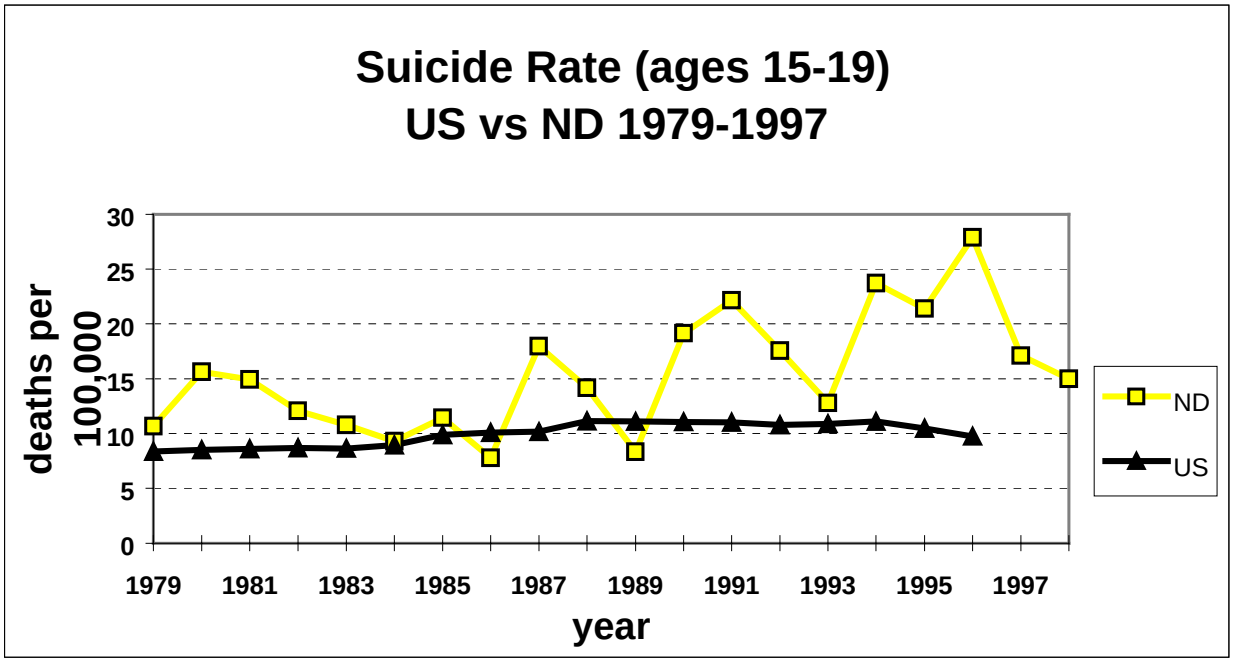


The number of suicides in the age group 10 through 14 is small (one to four) each year in North Dakota; therefore, rates vary widely from year to year. Valid rates for this age group can be obtained only when a time period of 10 years or more is used.

Suicide Rate United States 1987-1996 Ages 10-14 US Average 1.6/100.000								
Rank	State	Rate	Rank	State	Rate	Rank	State	Rate
1	Idaho	4.2	18	Wisconsin	2.0	35	Mississippi	1.5
2	**North Dakota**	**4.0**	19	Wyoming	2.0	36	Missouri	1.5
3	Colorado	3.6	20	Tennessee	1.9	37	Nebraska	1.5
4	Montana	3.3	21	Texas	1.8	38	Ohio	1.5
5	Utah	3.3	22	West Virginia	1.8	39	Michigan	1.4
6	New Mexico	3.0	23	Alabama	1.7	40	California	1.3
7	Oregon	2.8	24	South Dakota	1.7	41	Connecticut	1.3
8	Vermont	2.8	25	Virginia	1.7	42	Hawaii	1.3
9	Nevada	2.7	26	Delaware	1.6	43	Maryland	1.3
10	Maine	2.6	27	Florida	1.6	44	Pennsylvania	1.3
11	Arizona	2.4	28	Kansas	1.6	45	Indiana	1.2
12	Alaska	2.3	29	North Carolina	1.6	46	Illinois	1.1
13	Oklahoma	2.3	30	Rhode Island	1.6	47	Massachusetts	1.0
14	Minnesota	2.2	31	South Carolina	1.6	48	New Hampshire	0.9
15	Arkansas	2.1	32	Georgia	1.5	49	New Jersey	0.7
16	Louisiana	2.0	33	Iowa	1.5	50	New York	0.7
17	Washington	2.0	34	Kentucky	1.5	51	D.C.	0.3

Ages 15 through 19

In the United States from 1987 through 1996, there were 19,234 suicides of young people ages 15 through 19, for a rate of 10.7 per 100,000. During that time, North Dakota had the sixth highest rate with 87 suicide deaths in those ages.



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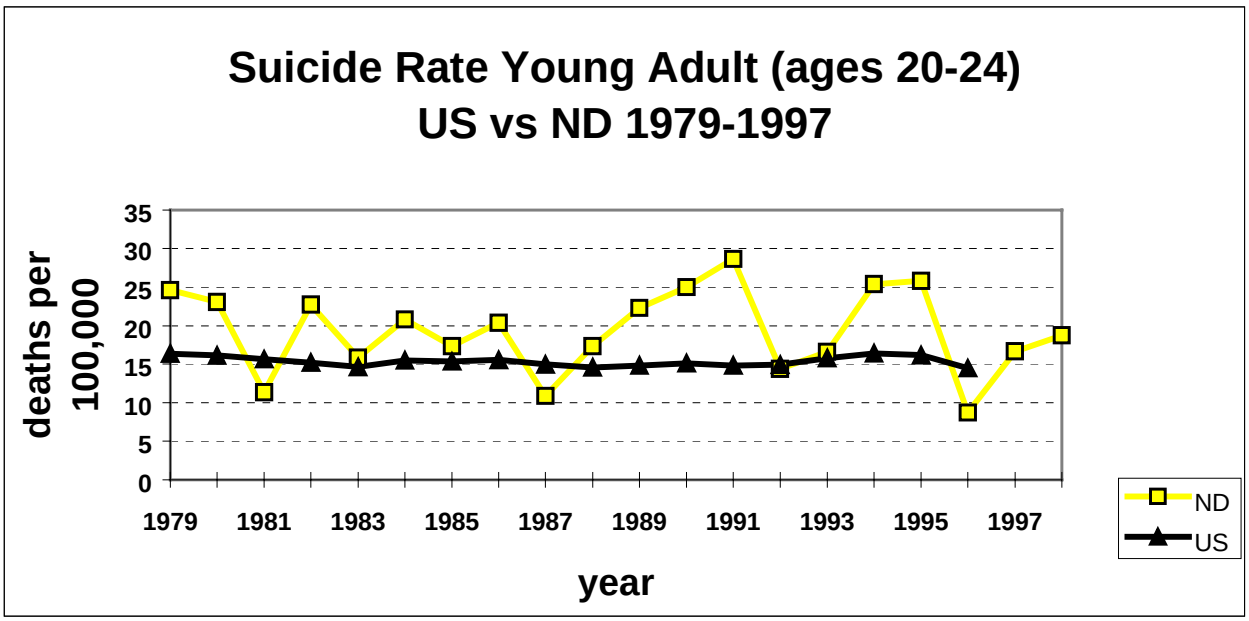
States with the highest suicide rates were in the Mountain Plains region of the United States.

Suicide Rate United States 1987-1996 Ages 15-19 US Average 10.7/100,000								
Rank	State	Rate	Rank	State	Rate	Rank	State	Rate
1	Alaska	28.7	18	Minnesota	13.2	35	Mississippi	10.3
2	Wyoming	23.8	19	Oklahoma	13.1	36	Hawaii	10.1
3	Montana	22.2	20	Louisiana	12.9	37	Alabama	10.0
4	New Mexico	21.5	21	Iowa	12.7	38	South Carolina	9.9
5	South Dakota	21.0	22	Arkansas	12.5	39	Florida	9.7
6	**North Dakota**	**18.0**	23	Missouri	12.5	40	Pennsylvania	9.6
7	Utah	17.8	24	Washington	12.4	41	Ohio	9.2
8	Nevada	17.6	25	Texas	12.2	42	California	9.0
9	Arizona	17.5	26	Maine	12.0	43	Illinois	9.0
10	Idaho	16.1	27	Indiana	11.6	44	Maryland	8.8
11	Colorado	15.6	28	Michigan	11.3	45	Delaware	7.7
12	Kansas	14.8	29	Georgia	11.3	46	Connecticut	7.5
13	New Hampshire	14.6	30	Virginia	11.1	47	Massachusetts	6.7
14	Oregon	14.3	31	North Carolina	10.9	48	D.C.	6.3
15	Nebraska	13.6	32	Kentucky	10.8	49	Rhode Island	6.3
16	Vermont	13.6	33	West Virginia	10.5	50	New York	6.2
17	Wisconsin	13.5	34	Tennessee	10.3	51	New Jersey	5.2

Ages 20 through 24

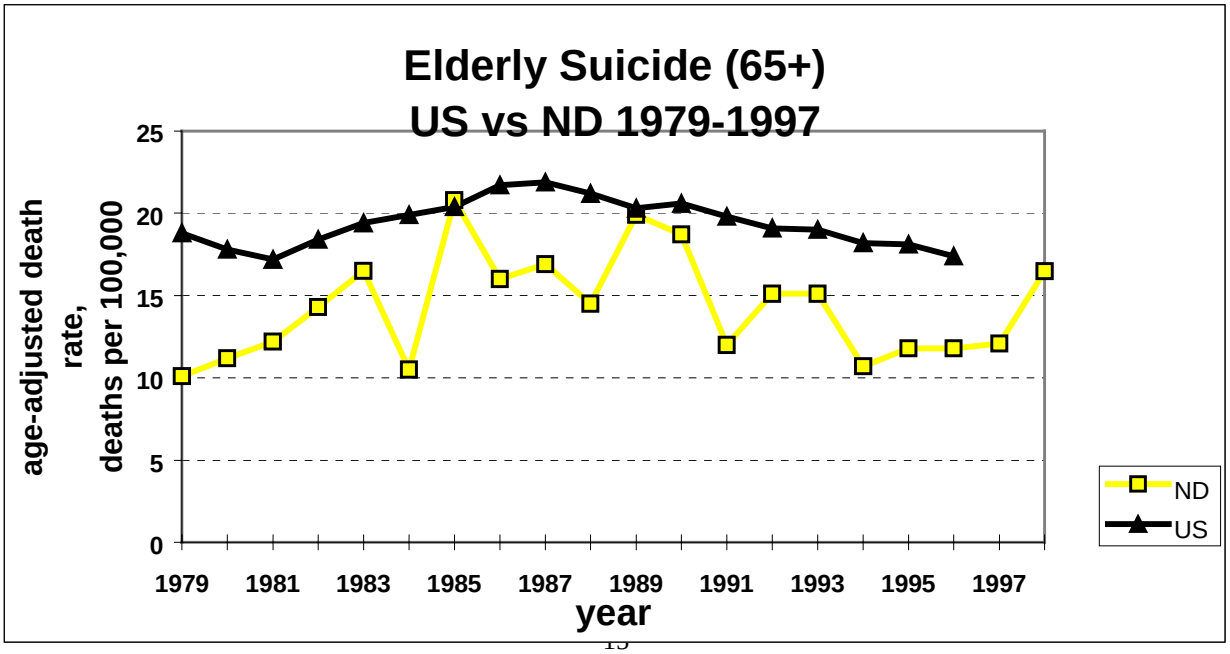
In the United States from 1987 through 1996, there were 28,749 suicides among young adults ages 20 through 24, for a rate of 15.2 per 100,000. North Dakota had 95 suicides and the 13th highest rate at 19.4 per 100,000.



Suicide Rate United States 1987-1996 Ages 20-24 US Average 15.2/100,000								
Rank	State	Rate	Rank	State	Rate	Rank	State	Rate
1	Alaska	36.4	18	Arkansas	18.1	35	Delaware	14.6
2	Wyoming	30.5	19	New Hampshire	17.9	36	Michigan	14.4
3	Nevada	29.5	20	Wisconsin	17.5	37	Mississippi	14.3
4	New Mexico	29.3	21	Louisiana	17.4	38	Virginia	14.3
5	Montana	27.9	22	Texas	17.2	39	Florida	14.2
6	Idaho	**25.8**	23	Missouri	17.1	40	Maryland	13.9
7	South Dakota	24.8	24	Kansas	16.8	41	South Carolina	13.9
8	Arizona	24.6	25	Iowa	16.3	42	Connecticut	13.7
9	Colorado	22.8	26	Florida	16.1	43	Hawaii	13.5
10	Utah	20.5	27	Tennessee	16.1	44	California	13.2
11	Oregon	20.3	28	Indiana	16.0	45	Rhode Island	13.2
12	Oklahoma	19.8	29	Georgia	11.3	46	Ohio	13.0
13	**North Dakota**	**19.4**	30	West Virginia	15.6	47	Illinois	12.7
14	Washington	18.7	31	Pennsylvania	15.4	48	Massachusetts	10.4
15	Vermont	18.4	32	Nebraska	15.2	49	New York	10.0
16	Maine	18.3	33	Alabama	15.1	50	New Jersey	9.2
17	Minnesota	18.2	34	Kentucky	14.9	51	D.C.	6.9

Ages 65 and older

In the United States from 1987 through 1996, there were 62,167 people ages 65 or older who committed suicide, for an age-adjusted rate of 18.8 per 100,000. One hundred and thirty-four North Dakotans of the same age committed suicide during this time period, for a death rate of 14.7 per 100,000.



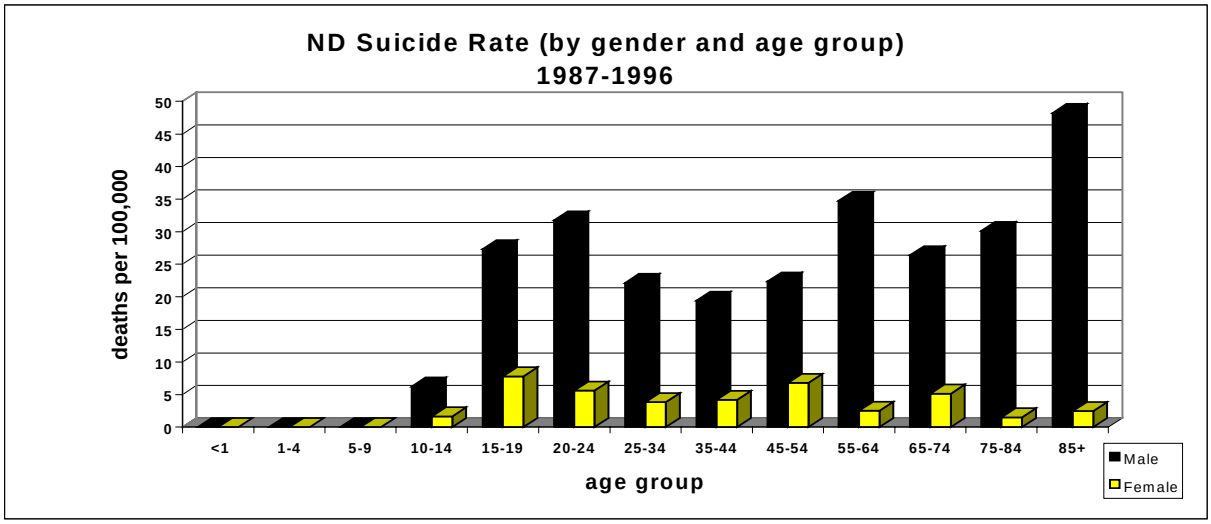
In contrast to the high suicide rate in adolescents and young adults, North Dakota has a lower suicide rate among the elderly. From 1987 through 1996, North Dakota had the eighth lowest suicide rate for those 65 years and older.

Suicide Age-Adj Rate United States 1987-1996
Ages 65 and older
US Average 18.8/100,000

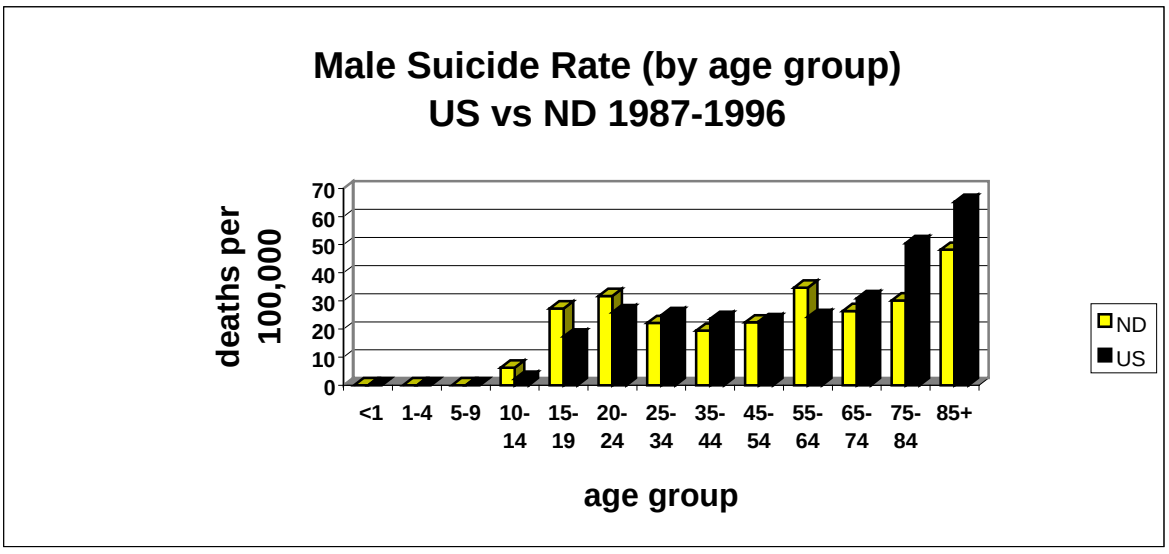
Rank	State	Rate	Rank	State	Rate	Rank	State	Rate
1	Nevada	39.4	18	Texas	21.1	35	Michigan	17.1
2	Wyoming	36.8	19	Tennessee	21.0	36	Iowa	17.1
3	Idaho	32.4	20	Maine	21.0	37	Kansas	17.0
4	Montana	31.7	21	Oklahoma	20.4	38	Nebraska	16.7
5	Arizona	27.0	22	Mississippi	20.3	39	Maryland	16.5
6	Colorado	**26.7**	23	Delaware	20.2	40	Ohio	16.5
7	New Mexico	26.2	24	North Carolina	20.1	41	Pennsylvania	15.6
8	Oregon	26.1	25	Louisiana	20.1	42	Illinois	15.4
9	California	23.2	26	Missouri	19.8	43	Hawaii	15.4
10	Washington	22.7	27	West Virginia	19.2	**44**	**North Dakota**	**14.7**
11	Florida	22.5	28	Indiana	19.1	45	Minnesota	14.3
12	Georgia	22.0	29	Alaska	18.4	46	Connecticut	13.0
13	Vermont	**21.8**	30	South Dakota	18.2	47	Rhode Island	11.3
14	Virginia	21.5	31	Arkansas	18.1	48	New York	10.9
15	Alabama	21.4	32	South Carolina	17.7	49	New Jersey	10.3
16	Kentucky	21.3	33	Wisconsin	17.7	50	Massachusetts	9.2
17	Utah	21.3	34	New Hampshire	17.7	51	D.C.	7.8

Gender

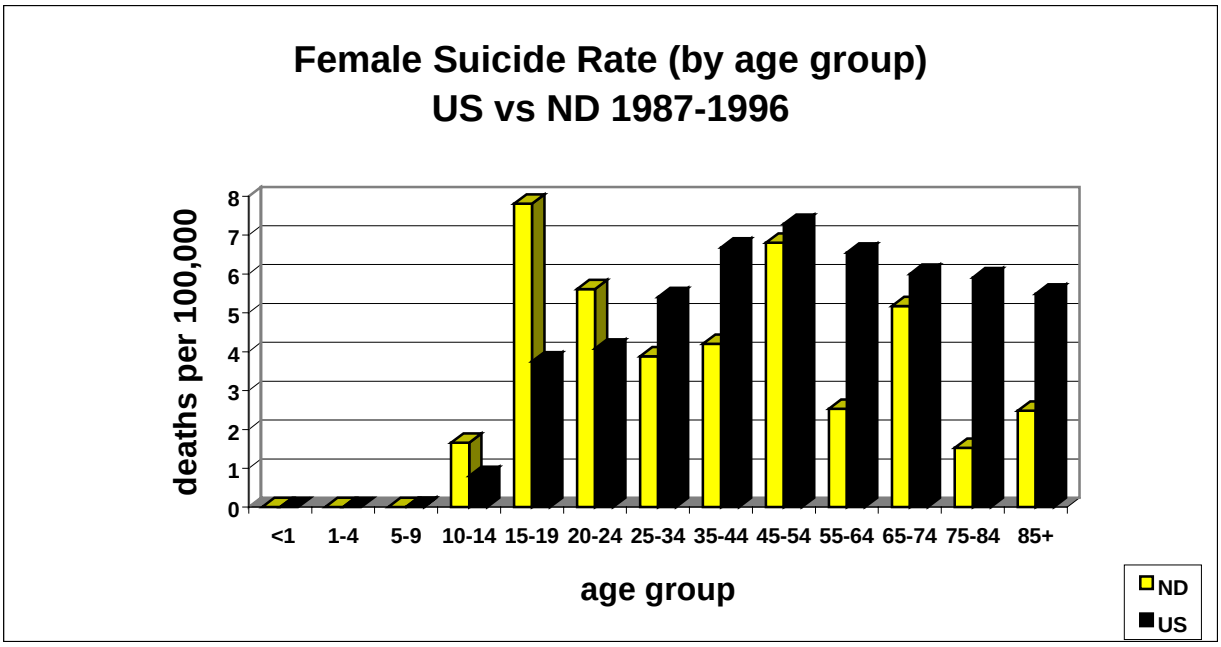
The suicide rate is four times higher among males ages 15 through 19 (17.4/ 100,000) than females (3.8/100,000). North Dakota teenage males (27.3/100,000) were 3.5 times as likely as females (7.3/100,000) to commit suicide from 1987 through 1996. The reverse is true for suicidal attempts by high school students. A recent national survey of high school students showed that the lifetime prevalence of suicidal behavior in females was almost twice that of males (10.3 percent versus 6.2 percent). Males are more likely to choose lethal means when attempting suicide.



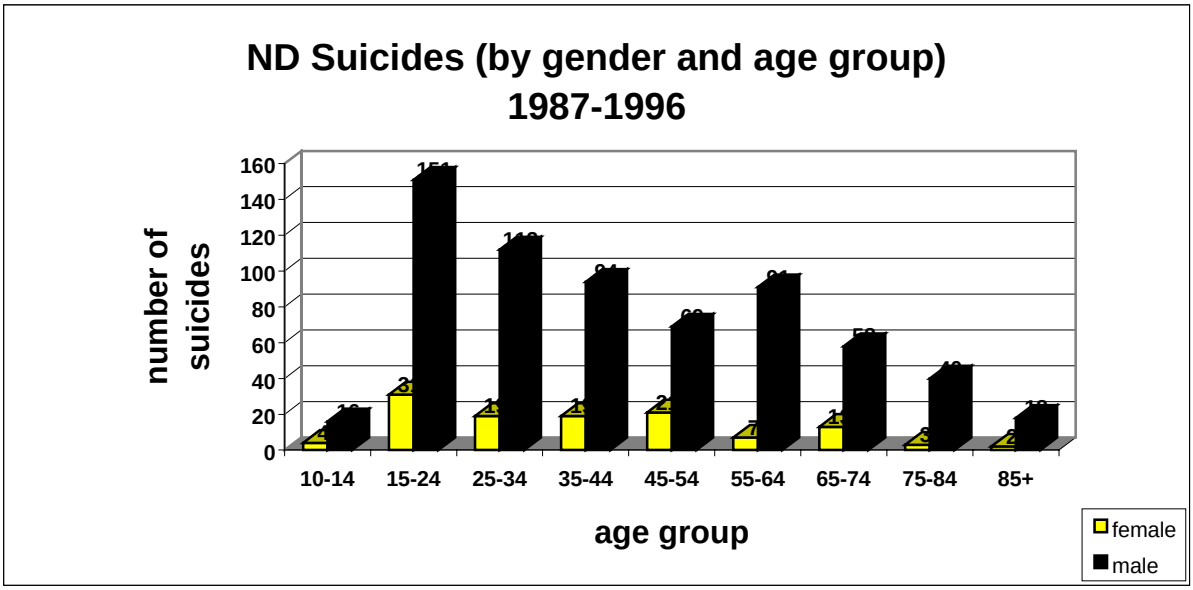
North Dakota's male suicide rates are higher in the age groups of 10 through 14, 15 through 19, 20 through 24, and 55 through 64 than those for males in United States during 1987-1996.



North Dakota's female suicide rates are higher in the age groups of 10 through 14, 15 through 19, and 20 through 24 than those for females in the United States from 1987 through 1996. The suicide rate in the age group of 15 through 19 was higher than any other age group.



When prevention of suicides is considered, the age group 15 through 24 should be a primary focus in North Dakota. From 1987 through 1996, a total of 182 suicides (151 males and 31 females) occurred in that age group.



Race

Young Native Americans have a particularly high suicide rate, especially among tribes that have experienced erosion of traditional culture and high rates of delinquency, alcoholism, and family disorganization. Suicidal behavior may be more common among lower socioeconomic groups and also may be highest in Hispanics, intermediate in African-Americans, and lowest in whites.

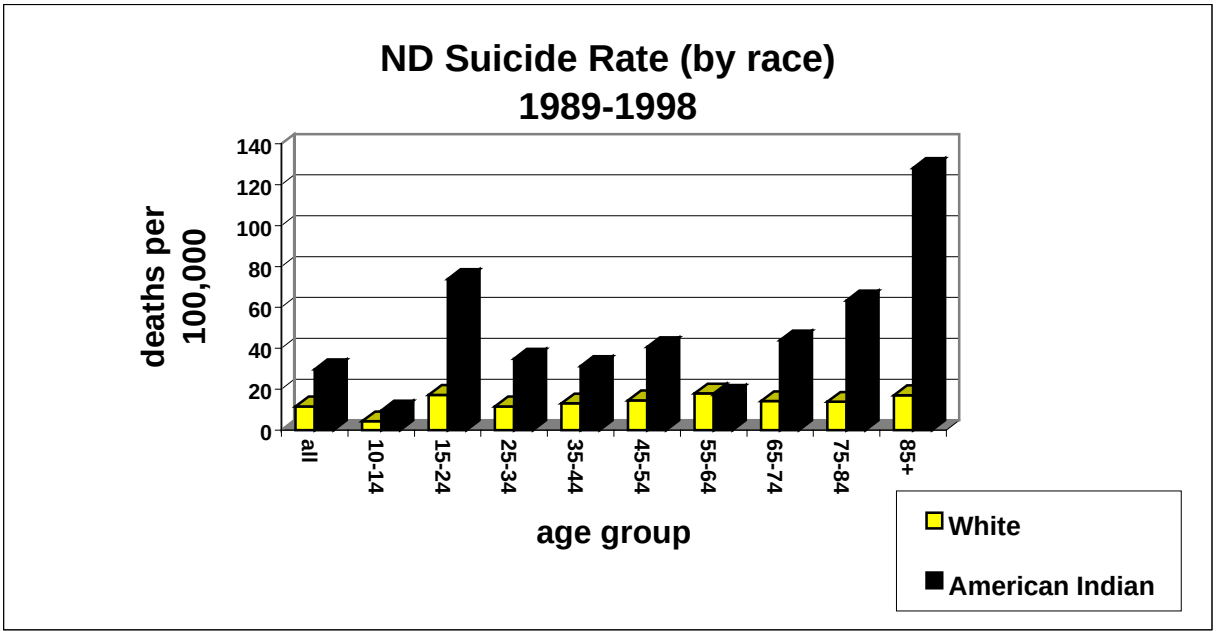
American Indians and Alaska Natives have the highest suicide rates of all ethnic groups in the United States. The second leading cause of death for American Indian and Alaska Native youth is suicide. Some protective factors that are associated with a decreased risk of Native American suicide attempts include:

- discussing problems with family and friends
- emotional health
- connectedness to families

A number of risk factors are associated with an increased risk of suicide attempts. They are as follows:

- family members or friends attempting or completing suicide
- physical or sexual abuse
- health concerns
- alcohol, marijuana or other drug abuse
- history of being in a special education class
- treatment for emotional problems
- gang involvement
- gun availability

Only 1 percent of male and female Native American youth surveyed with all three protective factors and none of these risk factors (friend or family member attempting or completing suicide, drug abuse, and physical or sexual abuse) attempted suicide. In contrast, 81 percent of Native American girls and 75 percent of boys with the three risk factors and none of the three protective factors attempted suicide (Borowsky).



The suicide rate for American Indians in North Dakota greatly exceeds that for whites. Overall, the American Indian suicide rate is 257 percent higher than the white suicide rate from 1989 through 1998. The American Indian age group 15 through 24 has a suicide rate (73.8/100,000) that is 429 percent higher than the white rate (17.2) for the same age group.

From 1989 through 1998, the majority of American Indian suicides were due to hanging.

- Of three suicides to American Indian youth ages 10 through 14, all three (100 percent) were from hanging.
- In contrast, seven of 19 (36.9 percent) suicides to white youth ages 10 through 14 were from hanging.
- Of 35 suicides to American Indians ages 15 through 24, 19 (54.3 percent) were from hanging.
- In contrast, 22 of 151 (14.6 percent) suicides to white youth ages 15 through 24 were from hangings.

Firearm safety efforts may have less impact on American Indian suicides than that of white populations.

North Dakota's suicide rate (16.2 per 100,000) for white teenagers ages 15 through 19 from 1987 through 1996 was 42 percent higher than the national rate for white teenagers (11.4) in the same age group.

Alcohol and Drugs

Youthful suicide victims frequently are intoxicated at the time of their death. Nevertheless, many adolescent suicide victims showed evidence of high intent (i.e., a strong wish to die), as

manifested by timing the suicide so as not to be discovered, planning ahead, leaving a note, choosing an irreversible method, and stating intent prior to the actual suicide. In contrast, *only about one-third of adolescents who attempt* suicide actually wish to die. In fact, most adolescent suicide attempts are impulsive, with little resultant threat to the patient's life. The motivation for most attempts appears to be a desire to influence others, gain attention, communicate love or anger, or escape a difficult situation.

Alcohol use may accompany depression with some similar behaviors. Changes in personality, academic decline and changes in peer relationships may indicate a drug or alcohol problem. Alcohol acts as a depressant (Takahashi). Adolescent alcohol-use behaviors are more common in North Dakota and may explain, in part, the higher adolescent suicide rate in our state.

Depression

Depression and suicidal behavior contribute significantly to injuries and deaths of children and adolescents. Childhood depression is difficult to diagnose (Jellinek). Depression can be mild or severe, and in adolescents, is associated with an increased risk of suicide and risk-taking behavior.

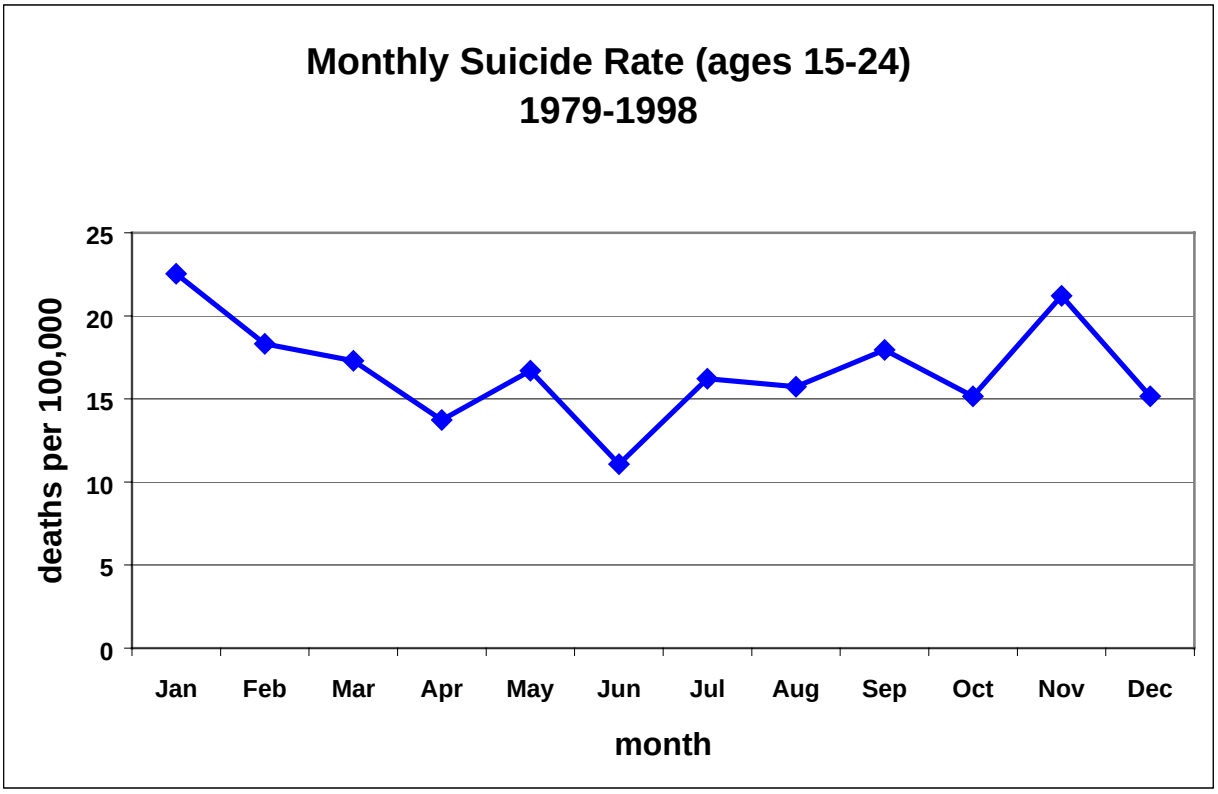
Major depressive disorder (MDD) often has an onset in adolescence and is associated with substantial psychosocial impairment and risk of suicide. A recent study of 73 young adults diagnosed with MDD in adolescence showed a substantial risk of suicide and treatment of MDD during adulthood (Weissman). The suicide attempt rate during adulthood in teenagers diagnosed with MDD in the 1980s was high (50.6 percent) while 22 percent had multiple attempts. Seven percent successfully completed suicide.

Adolescents did not show response to tricyclic antidepressants in community treatment programs in the 1980s and early 1990s. Selective serotonin reuptake inhibitors (SSRIs) and time-limited psychotherapies have recently shown promise in the treatment of adolescent depression. The National Institute of Mental Health currently is sponsoring multicentered clinical trials of SSRIs and psychotherapy for depressed youth.

Depressive symptoms, such as unhappiness and disappointment, are common and found in up to a third of the general population. Major depression affects up to one-sixth (16 percent) of the population. It appears that depression has increased over the years and seems to occur in younger age groups. These changes in depression may be the result of increased stress and reduced social support associated with modern living, particularly with youth. Genetic and environmental influences are found in depression. Neurotransmitters are strongly implicated in depression. Elevated cortisol levels also may be involved. Certain parts of the brain show signs of hyperactivity in people with depression.

Seasonal affective disorder (SAD) has symptoms similar to other types of depressive illness. Light therapy may be effective in treating SAD; however, side effects are commonly seen. North

Dakota suicide rates by month for 1979 through 1998 were examined for variation by season, with monthly rates adjusted by the number of days in the month. Monthly suicide rates were highest in November and January and lowest in June. With the exception of December, there appears to be a slight trend of lower suicide rates in warmer months.



Treatment of Depression

Treatment of depression includes pharmacotherapy (response rate 50 to 60 percent), supportive counseling, and cognitive behavioral therapy. Severe symptoms, suicide risk, substance abuse and failure to respond to initial treatment are reasons for referral from primary to specialty care. Electro-convulsive therapy (ECT) may be used in severe, life-threatening depressive illness. Alternative therapy for mild to moderate depression includes St. John's Wort and exercise (Doris).

Several types of prescription medications are used to treat depression. Tricyclics vary in cost from $10 to $100 a month, depending on generic or brand name use. Elavil, Norpramin, Tofranil, and Pamelor are some brand name tricyclin antidepressants. Selective serotonin reuptake inhibitors vary in cost from $60 to $70 a month, with brand names including Celexa, Prozac, Paxil and Zoloft. Monoamine oxidase inhibitors (MAOIs) include Nardil and Parnate and range $57 to $67 monthly. Other medications include Wellbutrin, Remeron, Serzone, Trazodone and Effexor.

Selective serotonin reuptake inhibitors have largely replaced the tricyclics and MAOIs as first-line drugs due to more tolerable side effects and relative safety in overdose. Selective serotonin reuptake inhibitors' side effects may include nausea, headache, nervousness, insomnia, fatigue, sexual dysfunction and weight gain. SSRIs interact with many other drugs. Tricyclics can cause dry mouth, constipation, blurred vision, weight gain, sedation and sexual dysfunction. Accidental or intentional overdose with as little as a one-week supply of a tricyclic can cause hypotension, seizures, cardiac arrhythmias, coma and death. MAOIs may cause sleep disturbance, hypotension, sexual dysfunction and weight gain, as well as interactions with other drugs and certain foods. Foods high in tyramine and decongestants can trigger a hypertensive crisis in patients receiving MAOIs.

Despite the existence of safe, effective and economical treatments for depression, many people with depression are seriously undertreated. Barriers among patients include failure to recognize symptoms, underestimating the severity, stigma, noncompliance with treatment, and lack of insurance. Health care provider barriers include poor professional school education about depression, limited training in interpersonal skills, stigma, inadequate time to evaluate and treat, failure to consider psychotherapeutic approaches, and prescribing inadequate doses of antidepressants for inadequate duration. Mental health care systems also include barriers (Hirschfeld).

Family Psychiatric History, Environment, and Personality

The relatives of both adolescent suicide attempters and completers have high prevalences of affective disorder, alcohol and drug abuse, suicide and suicidal behavior. In the families of both suicide attempters and suicide victims, a high prevalence of divorce, parental absence, exposure to family violence, and physical and sexual abuse has been noted. The family environments of suicidal versus nonsuicidal patients have been characterized as less supportive, more conflicted and more hostile (Brent).

A high percentage of suicide attempters have experienced a loss (death of a parent, sibling, or grandparent or loss of a possession) or witnessed physical violence between parents or had been physically abused themselves. Suicide completers tend to have impulsive-dramatic and avoidant-dependent personality disorders and high levels of aggression. Some teenagers commit suicide after a disciplinary crisis, rejection or humiliation (Jellinek). Many adolescent suicide attempters do not want to die. Rather, they want to end their psychological pain with a loss of consciousness and are torn between death and continued living in a more hopeful environment (King).

Sexual Orientation

The psychological problems of gay and lesbian adolescents are primarily the result of societal stigma, hostility, hatred and isolation. Gay youths account for up to 30 percent of all completed adolescent suicides (Perrin). Studies of adults completing suicide have not shown an increased number of suicides among homosexuals (Friedman). However, a study of 137 homosexual youths found that 41 had attempted suicide; nearly one-half of the attempts were of moderate-to-severe lethality (Remafedi 1991). Gay and lesbian youth are two to three times more likely to attempt suicide than other youth.

The 1995 Massachusetts Youth Risk Behavior Survey found that 3.8 percent of high school students self-identified as gay, lesbian, bisexual or not sure of their sexual orientation. These students reported a significantly increased risk of suicide attempts. Gay, bisexual or not-sure male students were 6.5 times as likely to attempt suicide than heterosexual male students while lesbian, bisexual or not-sure female students were 2.0 times as likely to attempt suicide than heterosexual female students. Being a gay, lesbian, bisexual and not-sure student was an independent risk factor for suicide attempts for males but not females (Garofalo).

A survey of 36,741 Minnesota students in grades seven through 12 found that 88.2 percent described themselves as predominantly heterosexual, 10.7 percent were unsure of their sexual orientation, and 1.1 percent described themselves as bisexual or predominantly homosexual. The percentage of students who were unsure about their sexual orientation steadily declined from 25.9 percent in 12-year-olds to 5 percent in 18-year-olds. The findings from the survey indicated the complexities and difficulties in assigning sexual orientation labels to adolescents.

The American Academy of Pediatrics recommends that gay and lesbian youth receive comprehensive health care and guidance. "The deadly consequences of AIDS and adolescent suicide underscore the critical need to address and seek to prevent the major physical and mental health problems that confront gay and lesbian youths in their transition to a healthy adulthood." (AAP 1993)

There is little information on the prevalence of adolescent homosexuality in North Dakota. There is also little information on the contribution of adolescent homosexuality to youth suicide in the state.

Geographic Distribution

Adolescent suicide rates are higher in western states than in eastern states. For all ages, the suicide rates in the West were higher than in the South, Midwest and Northeast.

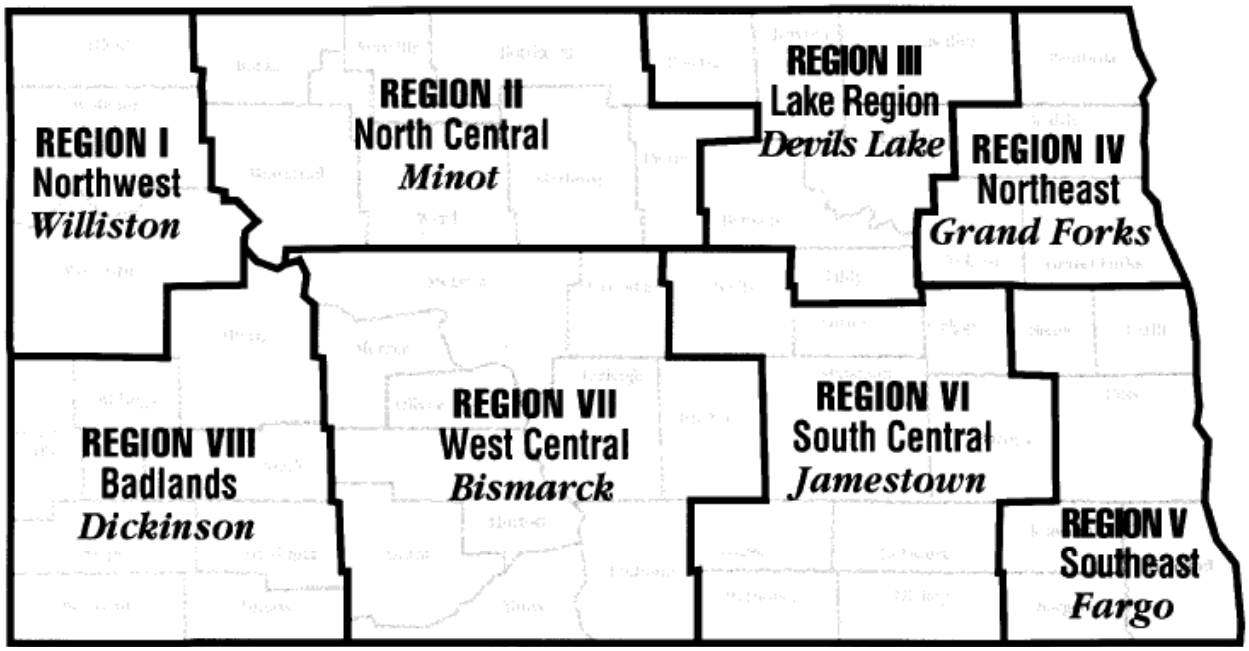
The Centers for Disease Control and Prevention examined 1990 through 1994 suicide rates for all age groups. The three leading methods of suicide (firearms, strangulation and overdose) were analyzed by region. The suicide rate was highest in the West (14.7) followed by the South

(13.1), Midwest (10.9) and the Northeast (8.6). Firearms were the leading method in all regions, accounting for 69.8 percent of all suicides in the South, 58.3 percent in the West, 57.8 percent in the Midwest, and 44.9 percent in the Northeast. The firearm suicide rate in the South was 130 percent higher than the Northeast. The overdose suicide rate was 100 percent higher in the West than in the Northeast (CDC-1997).

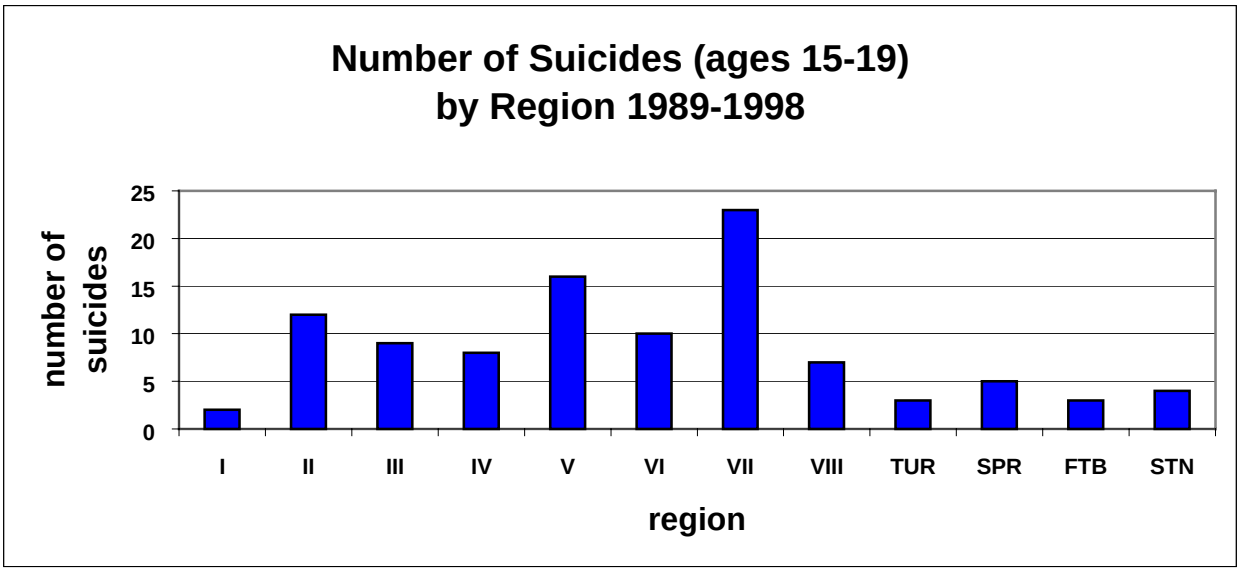
The reason for the West's high suicide rate is unknown and cannot be explained by demographic differences or access to firearms.

Geographic Distribution in North Dakota

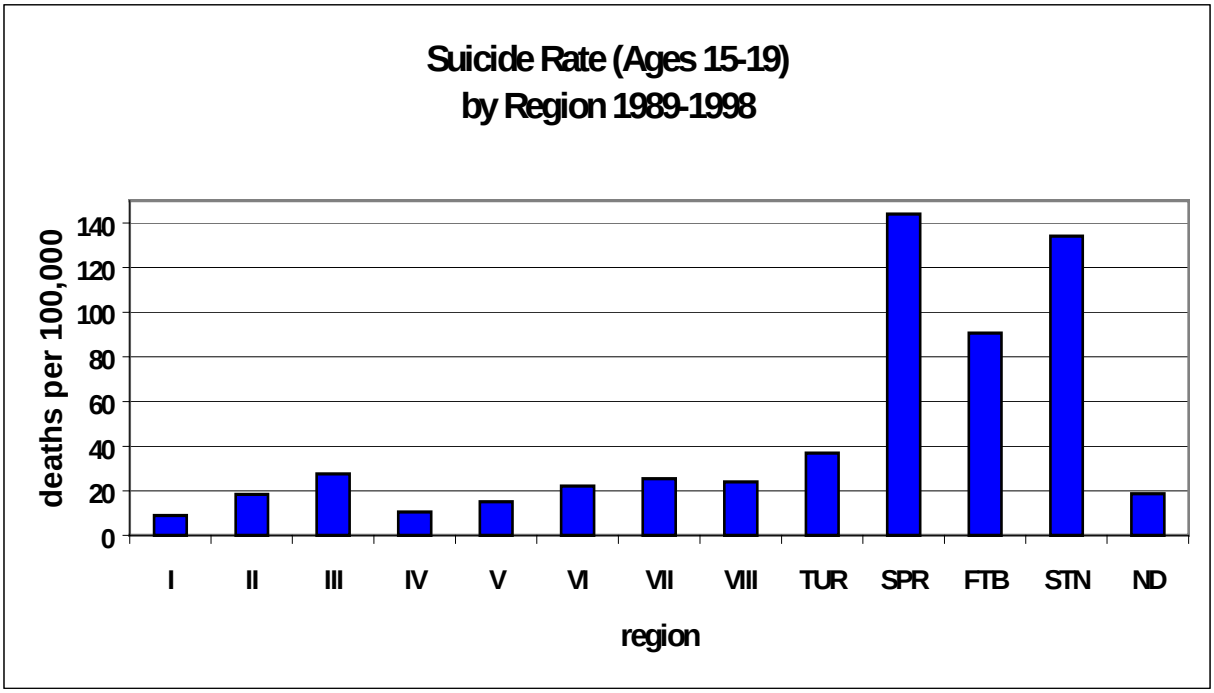
Youth suicides by governor's planning region are shown below. Regions I through IV run west to east from Williston to Grand Forks while regions V through VIII run east to west from Fargo to Dickinson.



The largest number of suicides in the age group 15 through 19 occurred in Region VII (Bismarck). The second largest number of suicides occurred in Region V (Fargo). Between three and five suicides occurred on the reservations.



Suicide rates were highest in Regions II (18.3), III (27.7), VI (22.2), VII (25.4), VIII (24.0), Turtle Mountain (36.9), Spirit Lake (144.1), Fort Berthold (90.6), and Standing Rock (134.2) when compared to the state average of 18.6 deaths per 100,000. Regions I through VIII include reservation deaths.



Firearms

In the United States, firearms are the most common method of suicide, followed by hanging, jumping, carbon monoxide and poisoning. Suicide by firearms appears to be associated with availability in the home and with victim intoxication. In some studies, handguns pose the greatest risk. By contrast, among suicide attempts, poisoning is the most common method, followed by wrist cutting.

In 1995, firearm-related deaths totaled 5,285 in the United States for children ages 0 through 19. Homicide and legal interventions accounted for 3,280, suicide for 1,450 and unintentional shooting for 440. The remainder (115) were of an undetermined nature (Stennies). Firearm-related injuries were the second-leading cause of death for persons ages 10 through 14 and 15 through 25. Most children older than age 7 have the strength to pull the trigger of a firearm, particularly a handgun. A 1994 random-digit, dialing national telephone survey found that one-third of households kept at least one firearm in the home and/or vehicle. Only 41.5 percent of households with guns and children stored all firearms unloaded and locked. Southern households were more than twice as likely (17.6 percent) to store at least one firearm loaded and unlocked compared with households in the rest of the country (7.0 percent). The presence of a firearm has been shown in several studies to increase the risk of suicide.

Kellermann studied suicides in the Seattle and Memphis areas during 1987 and 1990. The presence of a firearm in the home increased the risk of suicide five-fold. Other risk factors included living alone, alcohol use, drug treatment for psychiatric disease, illegal drug use and lack of high school graduation. Having a loaded gun in the home increased the risk nearly 10-fold, while an unloaded gun increased the risk more than three-fold. Few suicide victims acquired their guns within hours or days of their death; the vast majority had guns in the home for months or years.

Adolescent suicides in western Pennsylvania were associated with the presence of firearms in the home. The presence of a gun in the home, particularly if the gun was loaded, was closely associated with suicide in the absence of a diagnosable condition. Blood alcohol was frequently detected in adolescent suicides. Family members of 67 adolescent suicides during 1986 through 1990 were interviewed in the study and as were 67 control families (Brent 1993).

Another study indicated that recent purchasers of firearms are more likely to commit suicide. The increase in the risk of suicide is apparent within a week after the purchase of a handgun and persists for at least six years (Wintemute).

The impact of stricter gun control laws on suicide rates has been evaluated in just a few studies. A gun control law in Ontario was followed by a decrease in firearm suicides that was offset by an increase in suicides from other methods. A District of Columbia handgun control law was followed by a decrease in homicides by 25 percent and suicides by 23 percent (Loftin).

Firearm Suicides (ages 15 through 19)

In the United States from 1987 through 1996, there were 12,564 firearm suicide deaths in youth ages 15 to 19, for a rate of 7.0 per 100,000. North Dakota had the 10th highest rate with 11.8 firearm deaths per 100,000.

Firearm Suicide US 1987-96
Ages 15-19
US Average 7.0/100,000

Rank	State	Rate	Rank	State	Rate	Rank	State	Rate
1	Alaska	21.4	18	Colorado	9.3	35	Michigan	7.3
2	Wyoming	20.1	19	Wisconsin	9.1	36	Minnesota	7.3
3	New Mexico	15.2	20	Texas	8.6	37	South Carolina	7.2
4	Montana	14.5	21	Mississippi	8.5	38	Florida	6.7
5	Nevada	14.3	22	Nebraska	8.4	39	Pennsylvania	6.2
6	South Dakota	12.7	23	Maine	8.4	40	Ohio	5.3
7	Arizona	12.4	24	Missouri	8.3	41	California	5.3
8	Utah	12.1	25	West Virginia	8.2	42	Illinois	5.0
9	Idaho	12.0	26	Tennessee	8.1	43	Maryland	5.0
10	**North Dakota**	**11.8**	27	Georgia	8.1	44	Delaware	4.2
11	Louisiana	10.5	28	North Carolina	8.0	45	Hawaii	3.8
12	Kansas	10.2	29	Alabama	8.0	46	Connecticut	3.8
13	Oklahoma	9.9	30	Virginia	7.8	47	New York	3.5
14	Vermont	9.9	31	Kentucky	7.8	48	D.C.	3.5
15	Arkansas	9.5	32	Washington	7.7	49	New Jersey	2.1
16	New Hampshire	9.4	33	Iowa	7.7	50	Massachusetts	2.1
17	Oregon	9.4	34	Indiana	7.6	51	Rhode Island	1.5

Non-Firearm Suicides (ages 15 through 19)

In the United States from 1987 through 1996, there were 6,670 non-firearm suicide deaths in ages 15 through 19, for a rate of 3.7 per 100,000. North Dakota had the seventh highest rate at 6.2/100,000.

Non-Firearm Suicide US 1987-96
Ages 15-19
US Average 3.7/100,000

Rank	State	Rate	Rank	State	Rate	Rank	State	Rate
1	South Dakota	8.3	18	Massachusetts	4.6	35	Nevada	3.3
2	Montana	7.7	19	Wisconsin	4.4	36	Oklahoma	3.3
3	Alaska	7.3	20	Idaho	4.1	37	Georgia	3.2
4	Colorado	6.3	21	Illinois	4.1	38	Virginia	3.2
5	Hawaii	6.3	22	Indiana	4.1	39	Florida	3.1
6	New Mexico	6.3	23	Missouri	4.1	40	New Jersey	3.1
7	**North Dakota**	**6.2**	24	Michigan	4.0	41	Arkansas	3.0
8	Minnesota	6.0	25	California	3.8	42	Kentucky	3.0
9	Utah	5.7	26	Maryland	3.8	43	Delaware	2.9
10	Nebraska	5.2	27	Ohio	3.8	44	North Carolina	2.8
11	New Hampshire	5.2	28	Connecticut	3.7	45	New York	2.7
12	Arizona	5.1	29	Maine	3.7	46	South Carolina	2.7
13	Iowa	5.1	30	Vermont	3.7	47	Louisiana	2.3
14	Oregon	4.9	31	Wyoming	3.7	48	West Virginia	2.3
15	Rhode Island	4.8	32	Texas	3.6	49	Tennessee	2.2
16	Washington	4.7	33	D.C.	3.5	50	Alabama	2.0
17	Kansas	4.6	34	Pennsylvania	3.4	51	Mississippi	1.8

Percentage of Suicides Due to Firearms

Nationally, firearms accounted for 67.3 percent of adolescent suicides in 1990**.** The rate for suicides from firearms increased nationally from 1985 to 1990 while suicide rates from other means remained unchanged. In the United States from 1987 through 1996, 65.3 percent of suicides ages 15 through 19 were with firearms. North Dakota's percentage was 65.5 from 1987 through 1996. That is to say, the adolescent suicide rate in North Dakota is elevated for both firearms and non-firearms. Efforts to restrict access to firearms to high-risk youth may play an important part in North Dakota prevention activities. However, North Dakota's high teenage suicide rate cannot be easily explained solely by access to firearms.

Surveys of Suicidal Behavior in Youth

The Youth Risk Behavior Survey (YRBS) was administered to 1,823 students in 44 public high schools in North Dakota during the spring of 1999. The school response rate was 81 percent, the student response rate was 90 percent, and the overall response rate was 73 percent. The results are representative of all students in grades nine through 12. Students completed a self-administered, anonymous 92-item questionnaire. Survey procedures were designed to protect the privacy of students by allowing for anonymous and voluntary participation. Local permission procedures were followed before survey administration.

In 1995, the NDDoH offered the YRBS to a random sampling of schools in order to obtain a statistically valid sample to compare to national surveys. The sampling was certified by the Centers for Disease Control and Prevention as representing the state overall. A total of 1,517 students in 19 public high schools participated in the YRBS. Most of the North Dakota students participating in the YRBS were white (93.8 percent), with smaller participation from Black students (1.2 percent), Hispanic (1.2 percent) and other races (3.8 percent). The YRBS did not include a race question for American Indians. The 1995 national YRBS involved 10,904 students participating in 70 schools selected to produce a sample representing the United States. The national student response rate to the survey was 60 percent. In addition, 36 states were certified by the Centers for Disease Control and Prevention as having a statistically valid sample. North Dakota had the highest student response rate (85 percent) of the 36 states.

In 1992, the NDDoH offered the Centers for Disease Control and Prevention's YRBS to all North Dakota schools with students in grades nine to 12. A total of 17,052 students completed the survey. The overall response was 48.4 percent of the 35,232 students, grades nine to 12, registered in public, private and Native American schools in North Dakota. Rural school districts (less than 2,500 city or town population) had a 66.0 percent response rate, while urban school districts had a 34.8 percent response rate. Native American students comprised 7.7 percent and white students 88.9 percent of the respondents. The 1992 North Dakota survey cannot be considered representative of students in grades nine through 12 due to a response rate of less than 60 percent.

Results

The 1999 Youth Risk Behavior Survey showed that thoughts of suicide are common among North Dakota students in grades nine through 12:

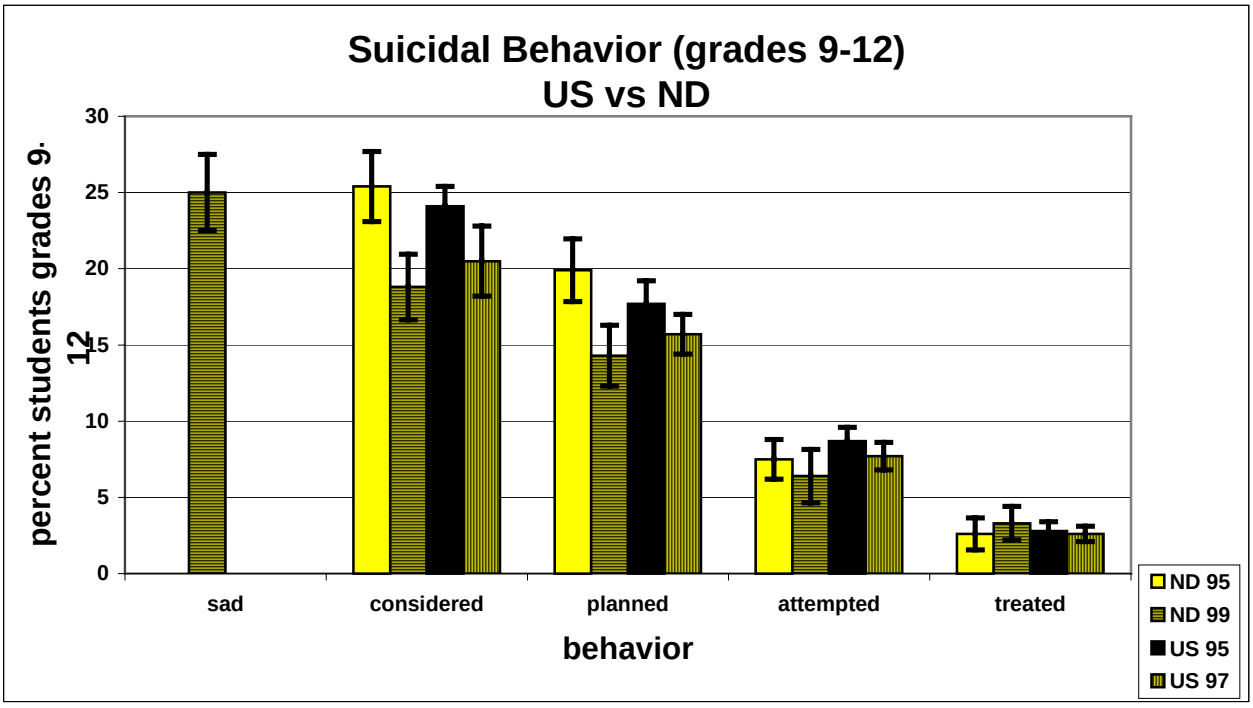
- 25.0 percent felt so sad or hopeless almost every day for two weeks or more in a row that they stopped doing some usual activities in the past 12 months.
- 18.8 percent seriously considered attempting suicide in the past 12 months.
- 14.3 percent made a plan about how they would attempt suicide during the past 12 months.
- 6.4 percent actually attempted suicide one or more times in the past 12 months.

- 3.3 percent made a suicide attempt in the past 12 months that resulted in an injury, poisoning or overdose that had to be treated by a doctor or nurse.

In 1995, 25.4 percent of students participating in the North Dakota YRBS indicated that they had seriously considered attempting suicide. There was little difference in grade level with suicide attempts. Males were less likely (20.3 percent) than females (30.3 percent) to have considered a suicide attempt. Nearly 20 percent (19.9 percent) of students indicated that they had made a plan about how they would attempt suicide in the past 12 months. Again, males were less likely (16.5 percent) to make a plan than females (23.1 percent).

In 1995, 7.5 percent of students indicated that they had attempted suicide in the past 12 months, with 2.6 percent indicating that the attempt resulted in an injury, poisoning or overdose that had to be treated by a doctor or nurse. Females (9.0 percent) were more likely to indicate that they had made a suicide attempt than males (5.5 percent) and were more likely to have an attempt require medical treatment (3.4 percent versus 1.6 percent).

Statistically significant improvements were seen from 1995 to 1999 among North Dakota students considering and planning suicide, while no significant changes were noted in attempts or attempts requiring medical attention. Confidence intervals (95 percent) are shown below.



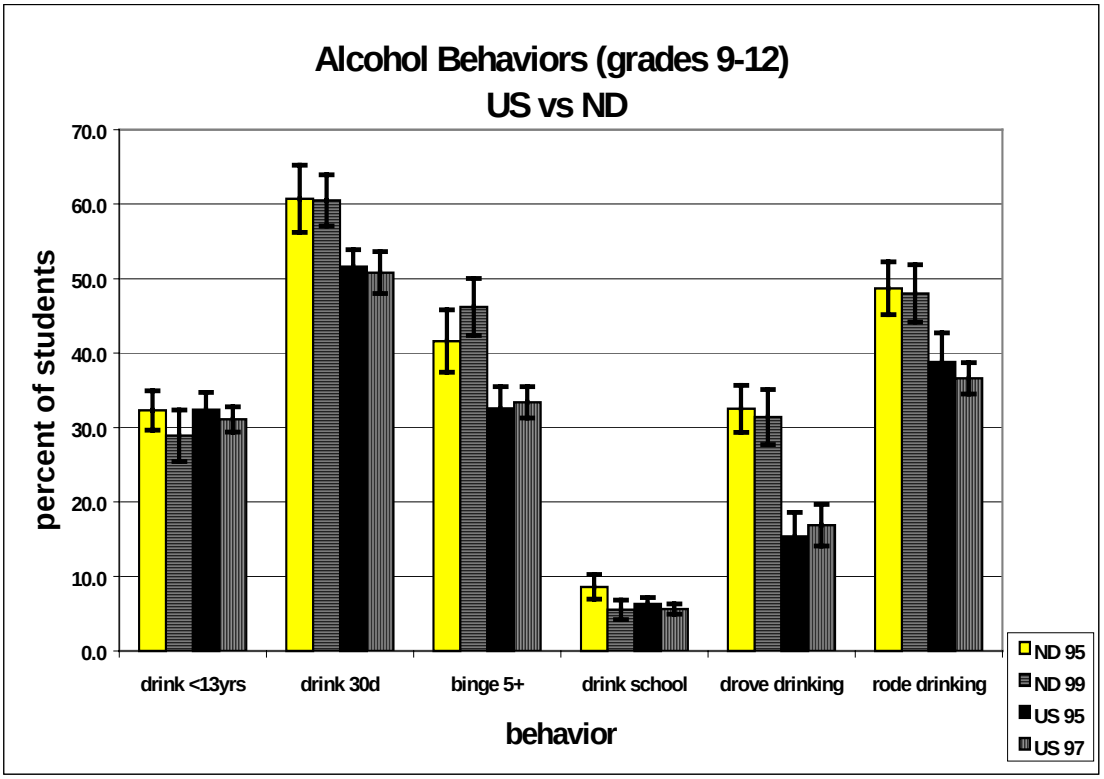
Native American suicidal behavior is available only from the 1992 North Dakota YRBS. In 1992, Native American female students were particularly at high risk for suicidal behavior. More than 40 percent (43.7 percent) had considered suicide, while 30.4 percent had planned suicide in the past year. More than 20 percent (21.5 percent) of Native American female students had

attempted suicide compared to 11.6 percent of white female students. Nearly 8 percent of Native American female students sought out medical attention for a suicide attempt in the past year compared to 2.5 percent for white female students. Native American male students were more likely to have attempted suicide (9.4 percent) than white male students (6.5 percent).

In 1992, North Dakota student's responses on suicide consideration (30.1 percent), planning (19.4 percent), and attempting (8.0 percent) in the past 12 months were very similar to respective national averages (29 percent, 19 percent and 7 percent) (McDonough).

Although North Dakota students in grades nine through 12 are similar to national averages in suicidal thoughts, planning and attempts, the actual suicide rates indicate a different pattern. Youth surveys are more likely to detect suicide attempters rather than potential completers. There are approximately 20 suicide attempts for every suicide. The actual number of suicides (7 to 13) each year among North Dakotans ages 15 through 19 is small in comparison to the number of estimated attempts requiring medical attention (200 to 1,500 per year). Approximately 3 percent of students surveyed indicated that they had required medical attention after attempting suicide (3 percent of 50,000 North Dakotans ages 15 through 19 equals 1,500).

One possible explanation of the high suicide rate in North Dakota teenagers is the amount of alcohol use. The 1995 and 1999 North Dakota YRBS consistently document high rates of alcohol use, binge drinking, and drinking and driving. Rates of drinking alcohol before age 13 and drinking on school property are not different among North Dakota and national youth.



Recommendations for Prevention

Surgeon General

In 1999, the United States Surgeon General made 15 recommendations to reduce suicides. These recommended first steps were categorized as Awareness, Intervention and Methodology, or AIM.

Awareness: Appropriately broaden the public's awareness of suicide and its risk factors

- Promote public awareness that suicide is a public health problem and, as such, many suicides are preventable. Use information technology appropriately to make facts about suicide and its risk factors and prevention approaches available to the public and to health care providers.
- Expand awareness of and enhance resources in communities for suicide prevention programs and mental and substance abuse disorder assessment and treatment.
- Develop and implement strategies to reduce the stigma associated with mental illness, substance abuse, and suicidal behavior and with seeking help for such problems.

Intervention: Enhance services and programs, both population-based and clinical care

- Extend collaboration with and among public and private sectors to complete a National Strategy for Suicide Prevention.
- Improve the ability of primary care providers to recognize and treat depression, substance abuse, and other major mental illnesses associated with suicide risk. Increase the referral to specialty care when appropriate.
- Eliminate barriers in public and private insurance programs for provision of quality mental and substance abuse disorder treatments and create incentives to treat patients with coexisting mental and substance abuse disorders.
- Institute training for all health, mental health, substance abuse and human service professionals (including clergy, teachers, correctional workers, and social workers) concerning suicide risk assessment and recognition, treatment, management, and aftercare interventions.
- Develop and implement effective training programs for family members of those at risk and for natural community helpers on how to recognize, respond to, and refer people showing signs of suicide risk and associated mental and substance abuse disorders. Natural community helpers are people such as educators, coaches, hairdressers, and faith leaders, among others.
- Develop and implement safe and effective programs in educational settings for youth that address adolescent distress, provide crisis intervention and incorporate peer support for seeking help.
- Enhance community care resources by increasing the use of schools and workplaces as access and referral points for mental and physical health services and substance abuse

treatment programs and provide support for persons who survive the suicide of someone close to them.
- Promote a public/private collaboration with the media to assure that entertainment and news coverage represent balanced and informed portrayals of suicide and its associated risk factors including mental illness and substance abuse disorders and approaches to prevention and treatment.

Methodology: Advance the science of suicide prevention

- Enhance research to understand risk and protective factors related to suicide, their interaction, and their effects on suicide and suicidal behaviors. Additionally, increase research on effective suicide prevention programs, clinical treatments for suicidal individuals, and culture-specific interventions.
- Develop additional scientific strategies for evaluating suicide prevention interventions and ensure that evaluation components are included in all suicide prevention programs.
- Establish mechanisms for federal, regional, and state interagency public health collaboration toward improving monitoring systems for suicide and suicidal behaviors and develop and promote standard terminology in these systems.
- Encourage the development and evaluation of new prevention technologies, including firearm safety measures, to reduce easy access to lethal means of suicide.

American Academy of Pediatrics

The American Academy of Pediatrics recommends the following gun safety precautions:

Empty It Out - Lock It Up
- Keep gun unloaded and locked up.
- Lock and store bullets in a separate location.
- Make sure children don't have access to keys.
- Ask police for advice on safe storage and gun locks.

Even if you don't own a gun:
- Talk with children about the risks of gun injury outside the home.
- Tell children to stay clear of guns when they are in the homes of friends.
- Ask parents of children's friends if they keep a gun at home.
- If they do, urge them to empty it out and lock it up.

A gun at home is 43 times more likely to be used to kill a family member or friend than a criminal intruder. The availability of guns in the home appears to be a more important risk factor for adolescent suicide than is firearm type or method or storage. Physicians should make a clear and firm recommendation that firearms be removed from the homes of adolescents judged to be at suicidal risk.

Evidence-Based Research

In response to an increase in suicides, the United States Air Force (USAF) implemented a comprehensive suicide prevention strategy in 1996. The strategy emphasized early interventions and strengthening protective factors (a sense of belonging and caring, effective coping skills, promotion of help-seeking behavior). The USAF's suicide rate decreased after the prevention activities were implemented (CDC).

Protective factors in adolescent health have recently been identified. Parent family connectedness, school connectedness, and self-esteem were protective factors in suicidal thoughts or attempts. Household access to guns, perceived risk of untimely death, poor grade point average, and appearing older than classmates were factors associated with increased suicidal thoughts or attempts (Resnick).

Statewide efforts to address adolescent suicide are just beginning. A reviewer noted that western states have higher suicide rates, "The accomplishments of western state efforts have been impressive. They have included two states (Oregon and Washington) with legislation and state funding for youth suicide prevention and state task forces in Colorado and North Dakota." (West)

North Dakota Recommendations

The North Dakota Adolescent Suicide Prevention Task Force makes the following recommendations:

Infrastructure

1. ***The Mental Health Association of North Dakota should take a lead role in coordinating adolescent suicide prevention activities.***
   Step 1: Work with the North Dakota Children Services Coordinating Committee (CSCC) regarding resources and possible funding options for suicide prevention efforts.
   Step 2: Work with state agency oversight and with the North Dakota Adolescent Suicide Prevention Task Force.
   Step 3: Identify and distribute a calendar of activities, trainings and Task Force efforts.

2. ***Develop a system of regional and tribal suicide prevention teams throughout the state by providing a system of training to the 85 crisis teams currently operating, with a goal of increasing their prevention skills.***
   Step 1: Work with Mental Health Association of North Dakota to identify and contact crisis team members.
   Step 2: Work with existing regional and tribal suicide prevention groups to coordinate training and regional/tribal planning sessions.
   Step 3: Provide eight regional and four tribal planning days to assist in organizing prevention activities.

Youth Development

3. ***Begin a statewide prevention strategy based on promoting assets and resiliency to all youth, with specific attention toward building healthy relationships between youth and adults.***
   Step 1: Work with the Department of Public Instruction (DPI) to consolidate and distribute data regarding Search Institute's Asset Building Surveys conducted in the state and results of the YRBS.
   Step 2: Work with DPI, North Dakota Department of Human Services (NDDHS), and other agencies to distribute information about asset building and promising approaches to prevention being implemented throughout the state.
   Step 3: Encourage regional and tribal crisis teams to implement a series of radio, television, billboard advertising and print stories on resiliency and asset-based messages targeting local communities.

4. ***Develop and promote youth leadership opportunities by identifying potential lead agencies and making the development of youth leadership efforts a priority.***
   Step 1: Work with the Youth Leadership Co-op, Sacred Child Project, North Dakota Department of Transportation, North Dakota Prevention Resource Center, DPI, Mental Health Association of North Dakota, and North Dakota Conference of Churches in identifying existing youth helping youth prevention efforts and promising programs.
   Step 2: Develop a web page and brochure identifying promising efforts in youth leadership in the following areas: mentoring, conflict mediation, small support group facilitation, after-school programs, alternative activities, and multi-media efforts.
   Step 3: Work with CSCC, DPI, North Dakota Attorney General's Office, NDDHS and private businesses to develop training and funding systems to support youth-helping-youth efforts statewide.

5. ***Establish statewide Community and Peer Gatekeeper Training to teach front-line workers and teen "peers" to recognize, screen, intervene, and refer youth that are at-risk for suicide behaviors.***
   Step 1: Develop a curriculum in collaboration with mental health professionals, suicide prevention experts, teen advisors and the North Dakota Indian Affairs Commission.
   Step 2: Provide eight regional and four tribal "train-the-trainer" sessions in which teams are identified, trained and provided with resource materials for their communities.
   Step 3: Conduct community and peer gatekeeper training sessions in all counties as well as colleges and universities using "train-the-trainer" teams.

Professional Education

6. ***Identify and distribute proven suicide prevention assessment tools to assist professionals in identifying, referring and treating youth at risk for suicidal behaviors.***
   Step 1: Develop a list of recommended assessment tools for a variety of professional groups including recommended protocols for assessment, treatment and follow-up services for adolescent and young adults at risk for suicidal behaviors.
   Step 2: Target the following groups for statewide training and distribution of specific assessment tools:
   - School guidance counselors – work in conjunction with DPI and the North Dakota Guidance Counselors Association.
   - Pediatricians, public health nurses, and emergency medical technicians (EMT) – work in conjunction with state groups, NDDoH, EMSC and the Native American Injury Prevention Coalition.
   - Residential settings and attendant care sites – work in conjunction with NDDHS, the Division of Juvenile Services (DJS) and the North Dakota Association of Counties.
   - Social workers, psychologists – work in conjunction with NDDHS and the North Dakota Board of Social Workers, the North Dakota Psychological Association and the North Dakota Social Welfare Conference.

- Probation and parole officers, DJS workers, and trackers-work in conjunction with North Dakota DJS, juvenile court, and licensed social workers.

Public Education

7. Conduct a statewide public awareness campaign around "means restriction" or reducing gun access to youth with suicidal risk factors. This effort will focus on parent education regarding firearm storage or removal, and professional training about assessing gun access in families with risk factors (aggressive-impulsive behavior, drug abuse, depression, etc.).

Step 1: Develop and distribute pamphlets, videos, and curriculum to be used during hunter safety classes regarding unintentional and impulsive shootings in cooperation with NDDoH and the North Dakota Game and Fish Department.

Step 2: Develop a multi-media effort designed to make parents aware of gun access safety issues in cooperation with DPI, NDDoH, the North Dakota Attorney General's Office, and NDDHS.

Step 3: Develop a program for training professionals to assess gun/means access by high-risk youth. The following groups will be targeted for training:

- Law enforcement – work in conjunction with the North Dakota Attorney General's Office and the North Dakota Peace Officers Association.
- School guidance counselors – work in conjunction with DPI and the North Dakota Guidance Counselors Association.
- Pediatricians, public health nurses, and EMT – work in conjunction with state groups, NDDoH, EMSC, and the Native American Injury Prevention Committee.
- Mental Health workers – work in conjunction with NDDHS, the Mental Health Association of North Dakota and other professional state groups.

8. *Educate policy makers with research-based information about the youth suicide problem in North Dakota, the initial steps in a comprehensive prevention plan, and the need for adequate funding to address the level of fatalities and injuries.*

Step 1: Develop a packet of handouts and training materials with state, national and regional data.

Step 2: Provide a one-hour education session to the following groups through individual presentations or identified conferences:

- North Dakota CSCC, the eight regional CSCC boards and the four tribal CSCC boards
- Legislative leaders
- School board members
- City, county and tribal commissions

Step 3: Develop ongoing communication through meetings, newsletters and conferences regarding youth suicide in North Dakota.

9. *Establish a dialogue between media policymakers and state suicide/violence prevention experts to develop approaches that reduce contagion following an act of suicide or violence.*

Step 1: Develop a summary of research-based materials regarding media-reporting influence on suicide and certain types of violence with the North Dakota Adolescent Suicide Prevention Task Force and Mental Health Association of North Dakota working in conjunction with NDDoH and North Dakota Attorney General's Office.
Step 2: Establish a recommended protocol for the media when dealing with suicide and violence issues.
Step 3: Present suicide and violence information to the North Dakota Newspaper Association and the North Dakota Broadcasting Association at their annual conferences.
Step 4: Provide an informal quarterly luncheon in which suicide/violence prevention experts and media policy makers can openly discuss youth suicide and violence issues.

Evaluation

10. Create an ongoing system for data collection regarding suicide fatality "follow back studies" and a system for monitoring self-inflicted injury rates for North Dakota.

Step 1: Work closely with national and regional experts to develop standards for the collection of "follow back" study data.
Step 2. Through the North Dakota YRBS, the NDDoH and DPI should profile youth receiving medical care due to a suicide attempt to identify patterns and other risk behaviors.
Step 3. Develop a system of collecting data on self-inflicted injuries through the NDDoH, Indian Health Services, and other health/insurance groups.

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